

REMARKS

Summary Of The Office Action & Formalities

Claims 1-7 are all the claims pending in the application.

Claims 1-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong in view of Watanabe (USP 5,802,049).

Applicant respectfully traverses.

Claim Rejections - 35 U.S.C. § 103

In rejecting claims 1-5 over Wong in view of Watanabe (USP 5,802,049), the grounds of rejection reiterate verbatim the grounds set forth in the previous Office Action January 30, 2004. Accordingly, Applicant incorporates by reference the arguments set forth in its Amendment of April 28, 2004 as if fully set forth herein.

The Examiner also responds to Applicant's arguments of April 28, 2004 as follows:

First, applicant argues (pages 10-12) that one of ordinary skill in the art would not understand Watanabe such that the skilled artisan would modify the network of Wong with the teachings of Watanabe. Specifically, applicant argues that there exists an infinite possible number of variations for modifying a switching network and a skilled artisan would require explicit instructions to apply the teachings of Watanabe to the network of Wong. However, as discussed in the previous office action, Watanabe discloses clear motivation and obvious modification means for combining the teachings of the switching network of Watanabe to other switching networks such as the switching network of Wong. Specifically, Watanabe teaches an improvement in ATM cell switching which provides routing with high probability of success (e.g., see col. 2, lines 26-38). Furthermore, Watanabe teaches a specific three-stage switching network (e.g., FIG. 1) having external connections (i.e., solid line connections to/from SRMs) which is approximately identical to the three-stage switching network of Wong (e.g., FIG. 2). Watanabe then teaches a cell

copying and internal switching structure (e.g., designated by dotted lines) is placed within a switching fabric (e.g., 121 in FIG. 1) to provide the improvement in ATM cell switching yielding high probability of switching success (e.g., see col. 2, lines 26-38). Thus, one of ordinary skill in the art would be motivated to apply the teachings of Watanabe to the switching network of Wong in order to provide an improvement in ATM cell switching yielding high probability of switching success (e.g., see col. 2, lines 26-38), and such a modification of Wong would be obvious to one of ordinary skill in the art in view of Watanabe by utilizing the cell copying teaching within switching fabric 121 of the three-stage switching network of Watanabe (FIG. 1) in the switching fabric $k \times k$ of Wong (FIG. 2). Thus, applicant's argument is not persuasive. Further, regarding applicant's argument that Wong does not teach the limitation of being "further configured so that the flow of data at each input of the inlet can be directed to each matrix of the outlet stage", such a teaching is clearly taught by Watanabe, in the combination of Wong in view of Watanabe, as discussed in the previous office action. Thus applicant's argument still is not persuasive.

Office Action at pages 2-3. Applicant respectfully disagrees.

Once again, the grounds of rejection are based on attributes that allegedly flow from the switching architecture of Watanabe. If one skilled in the art were to desire the attributes touted by Watanabe and were convinced that such attributes would indeed flow from the switching architecture disclosed in this document, then the skilled artisan would adopt that architecture as disclosed. There simply is no teaching or suggestion to pick and choose certain matrices from Watanabe and somehow incorporate these into Wong to achieve Applicant's claimed invention. Indeed, the grounds of rejection do not even set forth precisely which matrices would be lifted from Watanabe and precisely how these matrices would be incorporated in the architecture disclosed in Wong.

Furthermore, Wong discloses that its three stage architecture achieves the benefits of minimizing the number and size of the switches, minimizing the number of interconnections, increasing the throughput with low loss, and maintaining packet output sequence. The grounds of rejection have not addressed the impact on these benefits from the architecture in Wong if it were somehow modified to include features from Watanabe.

Moreover, the grounds of rejection do not take into account that the architecture of Watanabe is for a very particular application requiring point to multipoint (or multicasting) connections, which involve simultaneous paths from a root or source to a plurality of destinations. This is further evidence that one skilled in the art would not have lifted selected parts of this architecture and somehow modified the architecture of Wong to obtain the present invention.

Additionally, as stated in Applicant's previous response, Wong et al. would have *taught away* from Applicant's claimed invention, such that any experimentation, even in view of newly cited Watanabe, would lead the skilled artisan away from making the significant modifications needed to achieve the claimed invention. Claim 1 recites that the device for switching is "further configured so that the flow of data at each input of the inlet stage can be directed to each matrix of the outlet stage." Wong et al. clearly does not teach or suggest this feature. To the contrary, referring to Fig. 1 of the reference, if one assumes, for the sake of argument, that for a given first stage ($n \times m$) matrix each input is exclusively associated with a particular group r of outputs, then clearly each of these inputs is not associated with each second stage ($s \times p$) matrix. The opposite is in fact illustrated in Fig. 1 of Wong et al. The grounds of rejection do not address this

disclosure that teaches away from Applicant's claimed invention. *See, e.g., In re Hedges*, 228 USPQ 685, 687 (Fed. Cir. 1986) (describing how prior art references may "teach away" from a claimed invention, and concluding that teaching away provides "strong evidence of unobviousness").

Finally, the grounds of rejection do not take issue with the fact that in Watanabe the first stage (i.e., inlet stage or primary SRM) clearly does not have the matrix architecture in which "each input . . . of the inlet stage can be connected to an output of the inlet stage which can be selected only from Q outputs . . . exclusively associated with that input" To the contrary, while Watanabe does not disclose the details of the input matrix architecture, it would appear that either each input of a *primary* SRM matrix is connected to a single output of that matrix, or that each input of a primary SRM matrix is connected to each output of that matrix. Neither case meets the requirement of claim 1. Therefore, the grounds of rejection point to the architecture of the *second* stage (or secondary SRM). This reliance on the second stage is further evidence of improper hindsight picking and choosing.

Again, therefore, Watanabe does not provide any direction to the skilled artisan to reject this feature of Wong et al. That is, the applied art provides no instruction on which features in Wong et al. and Watanabe to reject and which to maintain, let alone how to combine features from these two references.

In the present Office Action , the grounds of rejection further state:

Second, applicant argues (pages 12-14) that Watanabe teaches away from having cell copying in the first stage by disclosing that cell copying is normally not included in the first stage. However, Watanabe considers a situation where a plurality

of cells could be copied to the same leaf (col. 3, lines 17-23). Watanabe clearly considers situations where such an occurrence is not an issue by disclosing that primary SRMs only “normally” do not have the function of cell copying. That is, for situations where the above cell copying situation is not an issue, Watanabe clearly provides for the primary SRMs to have cell copying capability. Accordingly, while Watanabe may disclose a preferred embodiment wherein the primary SRMs do not include cell copying (e.g., FIG. 1), at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize an alternate embodiment having cell copying in the primary SRMs as enabled by Watanabe (col. 3, lines 17-23) in order to provide a more robust system having further cell copying capability. Thus, applicant’s argument is not persuasive. Further, applicant argues that Watanabe does not teach the “exclusivity” limitation of applicant’s claims. That is, it appears that applicant has incorrectly related the teachings of Watanabe to be that of broadcasting. However, on the contrary, Watanabe clearly teaches the cell copying is for multicast connections (e.g., see col. 2, lines 15-25), and not broadcast connections. It is inherent in the art of multicasting that cells are transmitted exclusively to the addresses specifically defined by the multicast address. Thus, Watanabe clearly teaches the “exclusivity” limitation of applicant’s claims by teaching cell copying is for multicast connections.

Office Action at pages 3-4. Applicant respectfully disagrees.

The fact that Watanabe teaches that a feature is *undesirable* must be given due weight as it clearly teaches away from the Examiner’s alleged modifications and combinations. Neither the Examiner nor Watanabe explain what are the “situations where the above cell copying situation is not an issue.” To the contrary, as noted above, the architecture of Watanabe is specifically designed for multicasting. Moreover, Applicant does not agree that there is any disclosure in Watanabe of the alleged motivation “to provide a more robust system having further cell copying capability,” let alone attributing such a benefit to the modified architecture required by the grounds of rejection.

Regarding the statement that “it appears that applicant has incorrectly related the teachings of Watanabe to be that of broadcasting,” Applicant notes that the traversal arguments are based on the *multicasting* feature of Watanabe. It is precisely this multicasting feature that requires “copies from an input cell to a plurality of cells to be transmitted to a plurality of output paths.” Watanabe at column 3, lines 17-20. Again, referring to Fig. 1 of the reference, the top matrix of the secondary SRM is illustrated as having an input that is connected by phantom lines to each of the outputs of that stage. Aside from that, the figure makes no further disclosure about the architecture. Reviewing Fig. 1 in view of the disclosure at column 3 noted above, it is likely that each of the inputs to the top matrix in the *secondary* SRM is also connected to the same three outputs. Therefore, the secondary SRM matrices do not have an architecture that provides the exclusivity requirement recited in claim 1.

Regarding claim 4, the Examiner states that the “grounds of rejection have been provided on page 6 of the previous office action, and these grounds have been repeated in the following action.” Office Action at page 4. Applicant’s copy of the Office Action of January 30, 2004 does not include the text of the rejection of claim 4 that is in the present Office Action (*a copy of the January 30, 2004 Office Action is attached*). Rather, claim 4 is directed to a unique architecture involving unique switching relationships that are not taught or suggested in the prior art. As with claim 1, the Examiner has not established that the applied art provides instruction on which features in Wong et al. and Watanabe to reject and which to maintain, let alone how to combine features from these two references.

Regarding claims 6 and 7, Applicant submits that these claims are allowable for reasons similar to those stated above. In particular, there is no teaching or suggestion to lift some features from Watanabe and somehow incorporate them into the architecture of Wong. Moreover, the grounds of rejection do not establish how the alleged combination and modification would result in Applicant's claimed invention.

In summary, for the reasons stated in Applicant's last response and herein, the grounds of rejection do not establish the proper motivation to modify the architecture of Wong in view of Watanabe, nor do the grounds of rejection establish that the result of the alleged modification would be Applicant's claimed invention. Accordingly, the Examiner is kindly requested to reconsider and withdraw the rejection of claims 1-7.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

RESPONSE UNDER 37 C.F.R. § 1.116
U.S. Application No. 09/242,822

Attorney Docket No.: Q53403

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Respectfully submitted,

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